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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,293

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Rolf Muller

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EXAMINER

MESH, GENNADIY

ART UNIT

PAPER NUMBER

1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,293	Applicant(s) MULLER ET AL.	
	Examiner GENNADIY MESH	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-29,31-33,35-41 and 44-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-29,31-33,35-41 and 44-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1.1. Applicant's Amendment filed on December 18, 2009 is acknowledged.

Claims 1-12, 30, 34 and 42-43 have been cancelled by Applicant. Claim 13 and 15-16 have been amended. Claim 53 is newly added. Support for new limitation of claim 13 as "consisting of" was found in original Specification at paragraph [0037], which provide working example, wherein composition disclosed by Applicant consist of LDPE and PE wax. Support for new Claim 53 can be found in original Claim 13. Therefore, no New Matter has been added with this Amendment.

1.2. New Grounds of Rejection is introduced due to amendment of independent Claim 13. Therefore, it is proper to make this action Final.

Terminal Disclaimer

2.1. The Terminal disclaimer filed on December 8, 2009 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on copending Application 11/577,250 has been reviewed and is accepted. The terminal disclaimer has been recorded.

2.2. Therefore, nonstatutory obviousness-type double patenting rejection over claims of copending Application No. 11/577,250 has been overcome.

Claim Objections

3. Claim 50 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is

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required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Note, that Claim 50 is dependent on Claim 13, which has been amended by incorporating limitation "consisting of" which is limit claimed composition to components present in Claim 13 . Therefore, composition comprising additional component as " swelling agent" is broader than parent claim 13 and for this reason is being improper.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 50 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Note, that because amended Claim 13 use closed language as " consisting of " that compositions claimed by any dependent claims can not have any additional components (also see paragraph 3 above). Therefore, scope of Claim 50 is indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 13-29, 31-33, 35-37, 44-49 and 51-53 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Su et al.(US 6,107,430) and evidence given by Leino " **Single-Site Catalysts** " Article, Online Posting October 22, 2001.

5.1. Regarding Applicant's Claims 13 - 29, 31- 33, 35 - 37, 44 - 49 and 51-53 Su discloses film, wherein skin layer comprising blend of non-polar polymer and wax (see abstract) and pointing out that non-polar polymer can be chosen from group consisting of (see paragraph [0026]): " an isotactic polypropylene homopolymer, syndiotactic polypropylene homopolymer, metallocene catalyzed isotactic polypropylene homopolymer, metallocene catalyzed syndiotactic polypropylene homopolymer, ethylene-propylene random copolymer, butene-propylene random copolymer, ethylene-propylene-butene-1 terpolymer, low density polyethylene, linear low density polyethylene, very low density polyethylene, metallocene catalyzed polyethylene, metallocene catalyzed polyethylene copolymers" . Regarding wax Su discloses that Polywax can be used in composition. (see Note, that Polywax meet all limitations of Claims 13 ,31 -33 and 35 -38 as it poses linear structure, polydispersity of 1 to about 5 and M_n (Molecular weight) from 400 and density up to 0.98 g/cc (see paragraph [0031 - [0037])). Regarding non-polar polymer Su discloses that polydispersity of 1 to about 15, M_n in range from 5000 to about 100,000 (see paragraph [0038]). Regarding limitation of Claims 13 , 31 - 33 related to degree of branching as " $< 3 \times 10^{-2}$ " note,

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that this language does not required any degree of branching. Therefore, polypropylene as substantially linear polymer and/ or Polywax as linear low molecular weight polymer are inherently satisfied limitations of cited claims. In addition note, that linear polyethylene also have low degree of branching levels as long-chain branching (LCB) range from 1 to 3 branches per 1000 carbon atoms. (see evidence provided by Leino " **Single**-Site Catalysts, page 150).

Regarding Claims 26 - 29 Su discloses that amount of wax in composition can be in the range from 1 to 50 wt% (see paragraph [0039]).

Thus, all compositional limitations of Claims 13, 26 - 29 , 31 -33, 35 -38 and 44-48 are satisfied.

Therefore, as substantially same composition disclosed by Su will inherently have substantially same properties as Modulus, Elongation at break, Stress Yield and Melt flow as it required by Claims 14 - 25.

In light of the above, it is clear that Su anticipates the presently cited claims.

Alternatively, the presently claimed properties as Modulus, Elongation at break, and Stress Yield and Melt flow of the composition would obviously have been present once the composition disclosed by Su is provided and tested. Burden shifts to the Applicant to prove the contrary.

Regarding new limitation of Claim 53 note, that claim 53 is in format of product-by-process claim. In accordance with the applicable to the treatment of product-by-process claims (MPEP 2113), the process limitations in claim 53 have no probative value absent evidence to the contrary.

In addition note, that case law holds that "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 38 – 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Su et al.(US 6,107,430) and evidence given by Leino " **Single-Site Catalysts** Jialanella (US 6,300,398) as applied to claims 13 - 29, 31- 33, 35 - 37, 44 - 49 and 51- 53 above, and in further view of Kokko (Metallocene-Catalyzed Ethene Polymerization: Long-Chain Branched Polyethylene, September 2002).

Su combined with Leino discloses composition, comprising non-polar polymer, for example, linear low density polyethylene, which may have long chain branching, but silent about length of the branching chains.

However, Kokko teach that short chain branches, less than 40 carbon atoms will interfere with formation of crystal structure of polyethylene (see page 1,second

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paragraph) and when branch length increases they (chains) become able to form lamellar crystals.

Therefore, it would have been obvious to one ordinary of skill in the art at the time of the invention to use composition disclosed by Su combined with Leino, wherein polymer has long chain branching with length higher than 40 carbon atoms per teaching of Kokko, in order to increase overall crystallinity and probability for heterocrystallization with other polymers in composition.

Response to Arguments

7. Applicant's arguments with respect to claims 13 - 29, 31- 33, 35 - 41 and 44 - 53 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GENNADIY MESH whose telephone number is (571)272-2901. The examiner can normally be reached on 10 a.m - 6 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272 1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 1796

Gennadiy Mesh
Examiner
Art Unit 1796

/GM/

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